UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/897,207	07/02/2001	Michael Maguire	555255-012249	2050

7590 03/18/2005	EXAMINER
Joseph M. Sauer, Esq.	COURTENAY III, ST JOHN
Jones, Day, Reavis & Pogue	

ART UNIT	PAPER NUMBER
2126	

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DATE MAILED: 03/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/897,207	MAGUIRE ET AL.
	Examiner	Art Unit	
	St. John Courtenay III	2126	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>02 July 2001</u>.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
  closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-65</u> is/are pending in the application.
  4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☒ Claim(s) <u>24-35 and 39-65</u> is/are allowed.
6)☒ Claim(s) <u>1-23,36 and 37</u> is/are rejected.
7)☒ Claim(s) <u>38</u> is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>22 January 2002</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  a)☐ All b)☐ Some * c)☐ None of:
    1.☐ Certified copies of the priority documents have been received.
    2.☐ Certified copies of the priority documents have been received in Application No. _____.
    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).
  * See the attached detailed Office action for a list of the certified copies not received.

ST. JOHN COURTENAY III
PRIMARY EXAMINER

Attachment(s)
1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Detailed Action

1.   Applicant's claim for priority under 35 U.S.C. § 119(e) with respect to provisional application 60/215,605 filed June 30, 2000, is acknowledged.

2.   **35 U.S.C. §102**
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   Claims 1 and 36 are rejected under 35 U.S.C. § 102(e) as being anticipated by **Deo et al.** (U.S. Patent 6,282,294).

As per independent claim 1:
Deo teaches a software architecture for use in a mobile device having a processor [fig. 2, processor 30, col. 5, line 30] and a memory device [memory 32, col. 5, line 36, fig. 2], comprising:

-    one or more application programs stored in the memory device and executed by the processor [application program 42, col. 5, line 46];

-    and a plurality of controller modules, each controller module being configured to interface the application programs with

one of a plurality of data objects stored in the memory device in the form of a data model, wherein each controller module utilizes one or more generic interfaces to communicate with the application programs [see Personal Information Manager (PIM 42) and "exposed application program interfaces and methods" col. 5, lines 52-59].

As per independent claim 36:
Deo teaches a method of extending a software interface in a mobile device having a plurality of application programs, comprising the steps of:

- providing one or more generic interfaces [see "exposed application program interfaces and methods" col. 5, lines 52-59; col. 9, line 10];

- providing a plurality of controller modules, each of which utilizes the one or more generic interfaces to communicate with the plurality of application programs [see Personal Information Manager (PIM 42), col. 5, lines 52-59; col. 9, line 10; see also Programming Message Processing Component (PMPC) 212, discussion beginning col. 9, line 43]; and

- providing at least one data model associated with each application program, each data model configured to interface with one of the controller modules [see Component Object Model (COM), col. 8, line 65];

- wherein the controller modules enable each application program to interface with each data model [see Component Object Model (COM), col. 8, line 65; see PIM 42 and see also Programming Message Processing Component (PMPC) 212,

discussion beginning col. 9, line 43].

4.   Claims 1-23, 36, 37 are rejected under 35 U.S.C. § 102(e) as being anticipated by **Chan et al.** (U.S. Patent 6,005,942).

As per independent claim 1:
Chan teaches a software architecture for use in a mobile device having a processor and a memory device [see smart card discussion col. 4, beginning line 37], comprising:

- one or more application programs stored in the memory device and executed by the processor [applications 206A-206B, col. 4, line 39];

- and a plurality of controller modules ["multiple security domains" col. 7, line 4], each controller module being configured to interface the application programs with one of a plurality of data objects stored in the memory device in the form of a data model, wherein each controller module utilizes one or more generic interfaces to communicate with the application programs [see "Card Executive" col. 8, line 54 and associated Application Protocol Data Unit (APDU) interfaces 320A-320B and APIs 322A-322B, col. 7, lines 36-50].

As per dependent claim 2:
Chan teaches each controller module utilizes a specific interface to communicate with the one data object [see APDU interfaces 320A-320B, col. 7, line 38].

As per dependent claim 3:
Chan teaches more than one instance of the data model may be stored in the memory device at the same time [see memory allocation discussion, col. 6, lines 18-30].

As per dependent claim 4:
Chan teaches a virtual machine stored in the memory device and executed by the processor, wherein the virtual machine executes each controller module and corresponding data model [e.g., see "Java Card virtual machine" and associated discussion col. 8, beginning line 31].

As per dependent claim 5:
Chan teaches the virtual machine is an object oriented run-time environment [e.g., see "JAVA Card standard" and "Java Card virtual machine" and associated discussion col. 8, beginning line 31].

As per dependent claim 6:
Chan teaches the object oriented run-time environment is JAVA [col. 8, line 31].

As per dependent claim 7:
Chan inherently teaches each controller module and corresponding data model are constructed using a JAVA compiler [see Java discussion col. 8, beginning line 31].

As per dependent claim 8:
Chan teaches an operating system stored in the memory device and executed by the processor, wherein the virtual machine is executed by the operating system [e.g., see "JAVA Card standard" and "Java Card virtual machine" and associated discussion col. 8, beginning line 31].

As per dependent claims 9-13, 18, 20:
Chan teaches the use of "any application which can run on a
smart card", col. 4, lines 47-49].

As per dependent claim 14:
Chan teaches the one or more generic interfaces enable the
plurality of controllers to interface with an application program
installed on the mobile device that supports the one or more
generic interfaces [Application Protocol Data Unit (APDU)
interfaces 320A-320B and APIs 322A-322B, col. 7, lines 36-50;
see also use of "Java Card Standard" col. 8, line 31].

As per dependent claim 15:
Chan teaches each generic interface is configured to perform an
operation with any arbitrary data model [see multiple security
domains discussion col. 7, line 4].

As per dependent claim 16:
Chan teaches each application program is configured to query
each of the plurality of controller modules to determine whether
the controller module supports a particular type of generic
interface [see "SELECT APDU" discussion col. 8, line 61].

As per dependent claim 17:
Chan teaches additional controller modules may be added to the
software architecture that support one or more additional generic
interfaces [col. 4, lines 50-54, see "Java Card Standard" and
"Java Card API" discussion", col. 4, lines 50-54].

As per dependent claim 19:
Chan teaches the one or more generic interfaces include a field
provider interface for providing one or more of the application
programs with one or more fields from the data models [see
"multiple applications" discussion, beginning col. 4, line 56].

As per dependent claim 21:
Chan teaches the data objects are logged in a persisted list when stored in the memory device, and the persisted list identifies the data model corresponding to each data object [see SmartCard memory management discussion col. 4, line 41, see "application identifier" discussion col. 9, line 1].

As per dependent claim 22:
Chan inherently teaches only one instance of each controller module is executing at one time [see virtual machine and Card Executive discussion col. 9, beginning line 31].

As per dependent claim 23:
Chan teaches the controller module associated with a particular type of data model is identified to one of the plurality of application programs by the data model when the application program attempts to interact with the data model [see selection and personalization of Card Domain applet, col. 9, lines 33-45].

As per independent claim 36:
Deo teaches a method of extending a software interface in a mobile device having a plurality of application programs, comprising the steps of:

- providing one or more generic interfaces [Application Protocol Data Unit (APDU) interfaces 320A-320B and APIs 322A-322B, col. 7, lines 36-50];

- providing a plurality of controller modules ["multiple security domains" col. 7, line 4], each of which utilizes the one or more generic interfaces to communicate with the plurality of application programs [see "Card Executive" col. 8, line 54 and associated Application Protocol Data Unit (APDU) interfaces 320A-320B and APIs 322A-322B, col. 7, lines 36-50]; and

- providing at least one data model associated with each application program, each data model configured to interface with one of the controller modules [see Java Card Standard, col. 4, line 51];

- wherein the controller modules enable each application program to interface with each data model [see Java Card API, col. 4, line 52 and see "Card Executive" col. 8, line 54].

As per dependent claim 37:
Chan teaches the additional step of providing a virtual machine executing on the mobile device, wherein the virtual machine controls the plurality of controller modules and the data models [e.g., see "Java Card Virtual Machine" and associated discussion col. 8, beginning line 32].

5.   **Indication of Allowable Subject Matter:**
Dependent claim 38 appears to be allowable over the prior art of record if rewritten to include all of the limitations of the base claim and any intervening claims, subject to the results of a final search. Claim 38 stands objected to as being dependent upon a rejected base claim.

As per dependent claim 38:
The prior art of record does not teach, nor fairly suggest defining a second-order object within one or more data modules and a second-order controller module configured and operatively coupled as claimed.

6.   Claims 24-35, 39-65 appear to be allowable over the prior art of record, subject to the results of a final search.

As per independent claim 24:
The prior art of record does not teach, nor fairly suggest the use of a software architecture in a mobile device wherein a first-order data object, second-order data object, first-order controller module, second-order controller module, and generic interface are operatively coupled and interfaced with an application program as claimed.

As per independent claim 39:
The prior art of record does not teach, nor fairly suggest a method of adding functionality to an application program on a mobile device using a data model wherein one or more second-order objects are defined within the data model, a controller module that interfaces the application program with the data model, second-order data objects, and a displayed data object where a list of functions that may be performed on the selected second-order data object are displayed, as claimed.

As per independent claim 61:
The prior art of record does not teach, nor fairly suggest a method of adding functionality to an e-mail messaging application, comprising the steps of using an e-mail message data object in the form of an e-mail data model, one or more second-order objects within the e-mail message data object, a first-order controller module, and a second-order controller module, operatively coupled as claimed.

7. **Prior Art not relied upon:**
Please refer to the references listed on the attached PTO-892 which are not relied upon in the claim rejections detailed above.

How to Contact the Examiner:

Any inquiry concerning this communication or earlier communications from the examiner should be directed to St. John Courtenay III, whose telephone number is 571-272-3761. A voice mail service is also available at this number. The Examiner can normally be reached on Monday - Friday, 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, An Meng-AI who can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

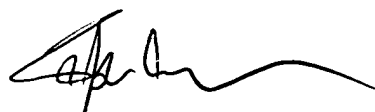**All responses sent by U.S. Mail should be mailed to:**

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

PTO CENTRAL FAX NUMBER:
703-872-9306

- Any inquiry of a general nature or relating to the status of this application should be directed to the **TC 2100 Group receptionist: (571) 272-2100.**

ST. JOHN COURTENAY III
PRIMARY EXAMINER